UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,318	07/30/2001	Joo Yeol Lee	P-217	8002

34610 7590 06/28/2006

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER	
LEE, JOHN J	
ART UNIT	**PAPER NUMBER**
2618	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/916,318	LEE, JOO YEOL	
	Examiner	Art Unit	
	JOHN J. LEE	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25 and 27-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-11,18-25 and 27-35* is/are allowed.

6)☒ Claim(s) *12 and 15* is/are rejected.

7)☒ Claim(s) *13,14,16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments with respect to claims 12 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 12 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US Patent number 6,640,100) in view of Beard et al. (US Patent number 6,434,187).

Regarding **claim 12**, Kojima discloses that a WLL-WLAN integrated transmitting and receiving method (Fig. 2, 3 and column 4, lines 59 – column 5, lines 65). Kojima teaches transmitting a data from a WLL base station (7 in Fig. 2) and transmitting it to a WLL receiving processor (see Fig. 2 teaches inherently the WLL base station has a controller and transmitting a data to WLL subscriber terminal, and transmitting the data to a receiving processor of WLL subscriber terminal) (column 4, lines 59 – column 5, lines 64 and Fig. 2). Kojima teaches that transmitting the data, which has been subjected to a predetermined procedure in the WLL receiving processor and to a WLAN transmitting processor (column 4, lines 59 – column 5, lines 64 and Fig. 2, 3, where teaches a plurality of wireless mobile device communicate with a WLL base station

(WLL receiving/transmitting processor) for providing a digital interface, and a plurality of WLL terminals interface with the WLL base station (WLAN transmitting/receiving processor) for PHS band interface). Kojima teaches that transmitting the data, which has been subjected to a predetermined procedure in the WALN transmitting processor to the WALN terminal (12 in Fig. 2)(Fig. 2, 3 and column 4, lines 59 – column 5, lines 64, where teaches the WALN transmitting processor in WLL base station, that the processor has a predetermined procedure, transmits the data to the WALN terminals).

Kojima does not exactly disclose the limitation "the WLL receiving processor through a digital baseband processor and a medium access controller to the WLAN transmitting processor share a phase locked loop". However, Beard discloses the limitation "the WLL receiving processor through a digital baseband processor and a medium access controller to the WLAN transmitting processor share a phase locked loop" (Fig. 1, 2, column 4, lines 46 – column 5, lines 36, and column 6, lines 10 – column 7, lines 21, where teaches a receiving processor, a digital baseband processor, and a transmitting processor, WALN medium access control processor serve by a phase lock loop feedback circuit). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Kojima system as taught by Beard, provide the motivation to enhance the PLL circuit, in order to achieve reducing the cost in wireless communication system.

Regarding **claim 15**, Kojima and Beard disclose the all the limitation, as discussed in claim 12. Furthermore, Kojima further teaches transmitting a data from a WALN terminal (12 in Fig. 2) and transmitting it to a WALN receiving processor (see

Fig. 2 teaches inherently the WLL base station has a controller and transmitting a data to WALN subscriber terminal, and transmitting the data to a receiving processor of WALN subscriber terminal) (column 4, lines 59 – column 5, lines 64 and Fig. 2). Kojima teaches that transmitting the data, which has been subjected to a predetermined procedure in the WLL receiving processor and to a WLAN transmitting processor (column 4, lines 59 – column 5, lines 64 and Fig. 2, 3, where teaches a plurality of wireless mobile device communicate with a WLL base station (WLL receiving/transmitting processor) for providing a digital interface, and a plurality of WLL terminals interface with the WLL base station (WLAN transmitting/receiving processor) for PHS band interface). Kojima teaches that transmitting the data, which has been subjected to a predetermined procedure in the WLL transmitting processor to the WLL base station (7 in Fig. 2)(Fig. 2, 3 and column 4, lines 59 – column 5, lines 64, where teaches the WLL transmitting processor in WLL base station, that the processor has a predetermined procedure, transmits the data to the WLL terminals or WLL transmitting processor in WLL terminal transmits the data to WLL base station).

Allowable Subject Matter

4. Claims 1-11, 18-25, and 27-35 are allowed.

Claims 1-11, 18-25, and 27-35 are allowable over the prior art of record because a search does not detect the combined claimed elements as set forth in the claims 1-11, 18-25, and 27-35.

As recited in independent claims 1, 18, and 32, none of the prior art of record teaches or fairly suggests that a WLAN reception and transmission processing section adapted to receive the radio signal from the plurality of WLAN terminals and digital baseband processor, and perform a predetermined reception and transmission process for the received radio signal for application to the digital baseband processor of the WLL transceiver section and for radio transmission to WLAN terminals, a medium access controller (MAC) adapted to supply the signal applied thereto from the digital baseband processor to the WLAN transmission processing section or supply the signal applied thereto from the WLAN reception processing section to the digital baseband processor of the WLL transceiver section, and also, a antenna unit including a first antenna for receiving the radio signal from WLL base station and the first antenna for receiving the radio signal from one of the WLAN terminals, and antenna unit applying the received radio signal the WLL transceiver section or the WLAN transceiver section, and together with combination of other element as set forth in the claims 1-11, 18-25, and 27-35. Therefore, claims 1-11, 18-25, and 27-35 are allowable over the prior art of records.

5. Claims 13, 14, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose "the data transmitted from the WLL base station is received through a first antenna and a second antenna, and the signal of the antenna is transmitted through a duplex to the WLL receiving processor and the signal of

the second antenna is transmitted through a triplexer to the to the WLL receiving processor, and the WLL receiving processor and the WALN transmitting processor share the phase locked loop by using a plurality of splitters" as specified in the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Archambaud et al. (US Patent number 6,304,560) discloses Personal Handy-Phone System Wireless Local Loops and Method of Transmitting Information Within Personal-Handy-Phone Systems.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231
Or P.O. Box 1450
Alexandria VA 22313

or faxed (571) 273-8300, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Edward Urban**, can be reached on **(571) 272-7899**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L
June 20, 2006

John J Lee

EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600